

## Department of Energy

Nevada Operations Office

P. O. Box 14100

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JUN 30 1986

Peter K. Fitzsimmons, Actg. Dir., HPD

### PLUTONIUM BIOASSAY

The Marshall Islands Planning Group has made recommendations relative to the continuance of certain DOE programs after termination of the trusteeship agreement. These recommendations are contained in a document, Recommendations on Post Compact of Free Association Programs by U.S. Department of Energy Relative to Post Nuclear Testing in the Marshall Islands, May 1986.

One proposal by Brookhaven National Laboratory (BNL) is to analyze urine samples for plutonium using the newly developed fission track etch technique. They propose to analyze 600 samples each year at a cost of \$338K per year inflation adjusted. It is proposed that the analyses run at least through FY-1988, at a cost of about \$700K, and another \$375K each year thereafter. Initial results of 35 analyses are included in Appendix B of the report.

Questions have been raised by researchers at Lawrence Livermore National Laboratory (LLNL) as to the validity of the BNL procedures that indicate the potential of significant plutonium doses to certain Marshall Islanders whereas LLNL calculations indicated that the contribution of plutonium to the total dose is "trivial" compared to the contribution from other radionuclides. Bruce Church has also expressed concern about the potential impact of findings which suggest or verify significant plutonium uptake from environmental sources.

Clearly there are, or will be, differences of opinion as to dose assessment formulated by BNL and LLNL. As program manager, I have the responsibility to sort through these differences and resolve them. Thus, I am calling upon HPD to make recommendations which will resolve the matter by allowing a decision to be made on the future of this program.

The questions as I see them are these:

1. Is there a significant difference between the plutonium dosimetry for the Marshallese as obtained by BNL and LLNL, and how will this impact on the credibility of research performed by the DOE?

*Marshall Islands - Legislation*

*John Rudolph's Files E.H.  
Box 15 of 18*

431

JUN 30 1986

Peter K. Fitzsimmons

- 2 -

2. Considering the initial results provided by BNL and the requirement to reassess prospective doses to persons returning to Enjebi and Bikini, is it necessary to continue analysis of the bioassay samples as proposed by BNL?

3. Are we in a position to make recommendations on the resettlement of Bikini Atoll and Enjebi Island based on the dosimetry information presently available?


While I agree that we must have the best available data and techniques for dose determination, we must have a solid basis to justify funding at this level whether it is funded from U.S. sources or is a potential technical assistance "buy back" from the RMI government.

I would, therefore, appreciate the assistance of HPD in providing recommendations. In order to facilitate making decisions concerning FY-1987 funding, I need your input by July 31.



Harry U. Brown  
Assistant to the Manager  
for Off-Continent Operations

cc:

J. E. Rudolph, MA, HQ (DP-22.1) GTN  
T. D. Chico, MA, HQ (DP -224)   
J. H. Dryden, Dir., PASO, Hono.

Pico 12  
femto 15  
zepto -18

curies  
conversation  
w/ Bruce  
Church  
7/17

Seeing Pu in urine, one would expect high Pu values in liver, lungs, & bones

① <sup>U Utah</sup> Another laboratory <sup>use for corroboration</sup> measure these samples <sup>with begin</sup>  
<sup>new reagents</sup> (plutonium free)  
<sup>make certain no cross-contamination</sup>  
 Oct 1 - 2  
 4/2 amg from  
 Kathy's

② Independent peer review where data is compared at both LLNL & Brookhaven

problem long range dose aspects

Question of cross contamination of urine w/ dust etc

79-81 Inquiry regarding fallout

fallout  
effects

Bruce  
Dr. Health <sup>Physician</sup>  
D.V.